

# Dropsonde System for Unmanned Aerial Vehicles, Phase II

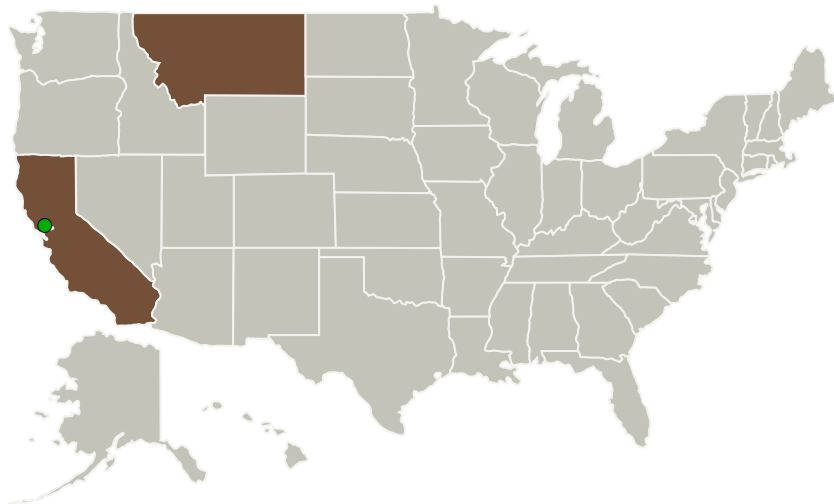
Completed Technology Project (2011 - 2013)



## Project Introduction

A small, modular dropsonde launcher is being developed for Unmanned Aerial Vehicles (UAVs). Some critical measurement needs can only be satisfied by in-situ measurements. Key examples of such measurements include detailed atmospheric profiles, point meteorological conditions on the surface, and in-situ measurements for calibration and validation of remote sensing systems. Phase I work saw the design and fabrication of a new type of dropsonde with a novel form factor and the associated launcher. The system was installed in a representative UAV nose. System components were successfully tested. Phase II will involve finalizing the launcher and dropsonde designs, developing the associated control and data handling system, building and testing the integrated system, and finally conducting test flights on a UAV. The ultimate result of the project will be a dropsonde system that can be fitted to many NASA UAVs, including small UAVs, and enable them to gather in-situ atmospheric profiles and surface measurements using dropsondes. The Phase II entry TRL is 5; the expected exit TRL is 8.

## Primary U.S. Work Locations and Key Partners



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Organizations Performing Work	Role	Type	Location
Anasphere, Inc.	Lead Organization	Industry	Belgrade, Montana
● Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

Primary U.S. Work Locations	
California	Montana

## Project Transitions

**June 2011:** Project Start**September 2013:** Closed out**Closeout Documentation:**

- Final Summary Chart(<https://techport.nasa.gov/file/138815>)

## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Organization:**

Anasphere, Inc.

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

**Principal Investigator:**

John A Bognar

**Co-Investigator:**

John Bognar

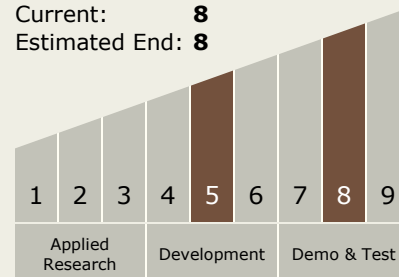
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### Technology Maturity (TRL)

Start: 5  
Current: 8  
Estimated End: 8



### Technology Areas

#### Primary:

- TX01 Propulsion Systems
  - TX01.4 Advanced Propulsion
    - TX01.4.4 Other Advanced Propulsion Approaches

### Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System